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SWIMMING POOL BONANZA

RESIDENTIAL swimming pools, formerly the symbol of the well-to-do, have increased about forty-fold in number in the past 10 years. In 1954, pool builders and suppliers numbered about 400. This year the number has grown to somewhere around 2,000.

This tremendous growth in backyard swimming pools prompted us, as appraisers, to investigate construction costs and possible rules of thumb which would tend to ease the appraiser's job in estimating these costs. A study of trade journals and interviews with informed people in the industry showed that reliable bench marks are as yet nonexistent. A reason for this situation is that the industry, still in its comparative infancy on a large-scale basis, is experimenting with new processes. Assuming quality construction, every pool presents a unique problem which depends upon the site, geological formation, needs of the owner, and other factors. In addition, the term "swimming pool" may mean anything from an inflatable plastic puddle, or a hole in the ground lined with roofing material, to a tile-lined affair complete with dressing rooms.

The wide variance in construction features and construction costs of pools and differences between geographical and climatic areas preclude setting up reliable cost and index factor tables. Rather than a detailed cost analysis, this bulletin is descriptive in nature, and is concerned with various construction features so the appraiser may be guided in evaluation.

Pools have been constructed of several materials, with some form of concrete or masonry being the most prevalent. Following is a description of various types of pool construction methods. Costs mentioned later are for square foot area of actual water surface. The range depends upon the quality of construction of the individual pool under appraisement.

POURED CONCRETE - Prior to the past few years, the great majority of pools were constructed of concrete poured in forms. Most of the large public pools are built of this material. A recent development has been the introduction of metal forms, which permits pools of various shapes rather than the rectangular limitations of wooden forms. A typical 20-foot by 40-foot pool of this construction, including filter, will cost between $6 and $10 per square foot, depending upon quality and equipment included.

GUNITE - Originally a trade name, gunite has come to mean the process of pneumatically applying a stiff concrete over steel mesh. Due to its application, the concrete has a greater density than the form-poured variety. Also, just about any shape is possible, as the wire mesh reinforcement and the fact that forms are not required allow for great flexibility. This method has proved to be somewhat less expensive, costs of a 20-foot by 40-foot pool running between $5.50 and $9.50 per square foot, including filter, depending upon quality. A 3,300-square-foot gunite public pool was constructed in a southern location for 60% of the cost estimated by a contractor using poured concrete construction.

DRY PACK CONCRETE - Sometimes referred to as "hand-packed concrete," this method resembles the gunite method in that steel mesh reinforcement is used. The concrete is a very dry mix and is placed against the ground and tamped into place. The density of the concrete is less than if poured or blown. Also, packing concrete in vertical planes is impossible, so that all walls must slope from ground level to the bottom of the pool. A typical dry pack concrete pool runs between $4 and $5 per square foot (pool only).

CONCRETE BLOCK - More economical than the poured concrete pool, this type can be built quickly and inexpensively. The major drawback has been the difficulty of keeping it watertight. To solve this problem, manufacturers have developed a vinyl plastic liner. Further economy can be reached by installing a sand bottom instead of concrete, letting the liner hold the water. Concrete block construction, excellent for buildings and walls, does not adequately withstand horizontal stresses and tends to crack or bulge in severe freezing temperatures. An 800-square-foot pool of this type would cost between $4 and $5 per square foot (pool only).

STEEL - Pools constructed of 1/4-inch prefabricated steel plates are considered more economical than concrete in northern areas where the pools must be able to withstand heavy frost. These pools will not crack, but are subject to bulging if not properly installed in the excavation. A steel pool, 20-foot by 40-foot in size, including filter, costs between $5 and $5.50 per square foot.

ALUMINUM - These pools are constructed in the same way as steel pools. However, they are somewhat lighter and easier to handle during installation. Their main advantage is their resistance to rust and corrosion. The price of these pools is comparable to that of the steel pools.

FIBERGLASS - A recent development in the industry is the molded fiberglass pool. The advantages are its strength and resilience to frost damage, its permanent finish, minimum maintenance requirements, and its ease of installation. The smaller pools are molded in one piece, and larger sizes (up to 20 feet by 40 feet, with a maximum depth of 7 feet) are molded in sections and assembled at the site. A 20-foot by 40-foot fiberglass pool, including filter, installed at the site, costs between $3.50 and $4.50 per square foot.

In evaluating the quality of pools, there are several items that should be noted. First of these is the finish on the pool walls. The various types of coatings and their average life expectancy are as follows: cement base paint, 1 year; chlorinated rubber paint, 3 years; vinyl resin base paint, 5 years; silica sand and cement aggregate, 10 years; pulverized marble and cement aggregate, 10 years. Copings are made of cast stone or vitreous tile, with tile preferred where severe freezing is likely to occur. Costs run from $2.50 to $5 per lineal foot. Decking around the pool is usually either concrete or large patio blocks. Due to the fact that the surface must be level and smooth, yet slip-proof, great care is needed in construction, and piers may be required. The cost of such decking will probably approach an amount twice the square foot cost of ordinary concrete walks. Good concrete decking costs between 90¢ and $1.20 per square foot, and patio blocks between $1 and $2 per square foot, depending upon the base.

There are two types of filter in general use: the pressure sand filter, and the diatomaceous earth filter, both of which do an excellent job of filtration. Without a filter system, the pool must be emptied and refilled at frequent intervals, while a filter system can filter the entire pool in 6 to 8 hours. The pressure sand type is preferred to the diatomaceous earth filter for residential pools due to the greater ease of operation and maintenance. However, the latter is more acceptable for public pool installations. Either type of filter, including plumbing, costs between $400 and $600 installed, in the average-sized residential pool.

In estimating value of residential pools, the appraiser must keep in mind the problems faced by the cost estimator or contractor in submitting a bid. Of prime importance are the topography and subsoil conditions. Also important is the availability of electricity and water. The need for piers or footings should be considered. The type of equipment desired and location of the filter system has a major effect on the final cost of a pool. Three types of lines are in general use (copper, galvanized steel, and plastic), and there can be 100% variation in cost, depending upon material. Also, a larger line is required for lines to a filter system located a greater distance from the pool. All of the above factors, along with the cost of the pool itself and extra equipment and facilities, contribute to the construction cost of a residential pool.

The costs mentioned in the preceding discussion apply to the St. Louis, Missouri, area. Higher costs occur in northern localities where sharp and deep winter freezing occurs. Lower costs will be found in southern areas where there is no freezing, thus requiring less heavy construction and less reinforcement.

The life span of swimming pools is difficult to estimate. A great deal depends upon the amount of maintenance performed by the owner. There have been concrete pools which have cracked within the first few years of use due to ground water or inadequate drainage systems. Repairs are costly, especially when original construction was of a cheap variety. The well-constructed concrete pool has a life expectancy of 20 to 25 years, depending upon the degree of main-

tenance. In this vein, the only experience readily available is that of public pools which necessarily receive a greater amount of care and maintenance than private pools. In estimating depreciation on other types of pool construction, the difficulty is in the lack of experience due to the recent advent of these various processes. It is estimated that a gunite pool will have the same life expectancy (20 to 25 years) as a poured concrete pool. An aluminum pool might have a 25-year life, and a steel pool slightly less. Nothing is certain about the longevity of plastic pools. However, it is felt that allowance of a 25-year life would be practical. Manufacturers of vinyl liners guarantee the life of the material at 5 years, which is considered a conservative estimate of its life expectancy.

Filter systems, being mechanical, are subject to shorter life expectancy. A reliable estimate is that the pump and motor will last from 5 to 10 years, and the tank and piping from 10 to 15 years. A municipal pool in the St. Louis area replaced its pressure sand filter system last year after 20 years of operation. Public pools generally have equipment of a more heavy-duty variety than do residential pools, so that a 15-year life appears logical and conservative.

The valuation of swimming pools presents not only problems dealing with cost and straight physical deterioration, but also problems regarding functional obsolescence, specifically, the question of whether a pool represents an underimprovement or an overimprovement to the property. Certainly an owner of a $10,000 home in a large eastern or midwestern city who installs a $4,000 or $5,000 pool will not be able to r e g a i n the full cost in a sale. The property, therefore, suffers an overimprovement and should be penalized. The absence of a pool does not represent an underimprovement, as a pool may be added at any time by a buyer. We have encountered exceptions to this rule, but they are almost negligible in number. The situation depends upon the specific locale, the specific property, and, as in many other appraisal problems, the experience and judgment of the appraiser.

Byron Hastings

BYRON HASTINGS